STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

May 2018

Log No. _____

1. State Building Code to be Amended:

- ☒ International Building Code
- ☐ ICC ANSI A117.1 Accessibility Code
- ☐ International Existing Building Code
- ☐ International Residential Code
- ☐ International Fire Code
- ☐ Uniform Plumbing Code
- ☐ International Mechanical Code
- ☐ International Fuel Gas Code
- ☐ NFPA 54 National Fuel Gas Code
- ☐ NFPA 58 Liquefied Petroleum Gas Code
- ☐ Wildland Urban Interface Code

For the Washington State Energy Code, please see specialized energy code forms

Section(s): **429.2 (Existing Amendment)**

Title: **Electric vehicle (EV) charging infrastructure**

2. Proponent Name (Specific local government, organization or individual):

Proponent: **Patrick Hanks (Building Industry Association of Washington)**
Title: **Policy and Research Manager**
Date: **9/17/24**

3. Designated Contact Person:

Name: **Patrick Hanks (Building Industry Association of Washington)**
Title: **Policy and Research Manager**
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Cell:
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4. **Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached.

   Clearly state if the proposal modifies an existing amendment or if a new amendment is needed. If the proposal modifies an **existing amendment**, show the modifications to the existing amendment by underlining all added language and striking through all deleted language. If a new amendment is needed, show the modifications to the **model code** by underlining all added language and striking through all deleted language.

   Code(s): 2024 IBC (Existing State Amendment) **Section(s):** 429.2

   Enforceable code language must be used.
   Amend section to read as follows:

429.2 Electrical vehicle (EV) charging infrastructure.
Buildings and accessory structures shall be provided with EV charging stations, EV-Ready parking spaces, and EV capable parking spaces in accordance with Table 429.2. Calculations shall be rounded up to the nearest whole number. Where a building contains more than one occupancy, the electric vehicle charging infrastructure percentages of Table 429.2 shall be applied to the number of spaces required for each occupancy.

Exceptions:

1. Except for Group A, Group E, and Group M occupancies, on-site parking with less than 10 parking spaces shall not be required to comply with Section 429.2.
2. Group R-2 occupancy shall not be required to comply with Section 429.2.
3. Group A, Group E, and Group M occupancies shall comply with one of the following, whichever is greater:
   - 2.1 The provisions of Section 429.2 shall apply only to designated employee parking spaces.
   - 2.2 One of each 200 parking spaces or fraction thereof shall be EV Ready. One of each 200 parking spaces or fraction thereof shall be an EV Charging Station.

5. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

   This proposal exempts R-2 occupancy from the requirements of Section 429.2. This will lower construction costs for small multifamily residential buildings. Middle housing, which often falls under R-2 occupancy, is becoming a critical part of state and national strategies to address the housing crisis. They offer diverse and affordable options to increase housing density in a way that is compatible with the character of many local jurisdictions. Making multifamily residential buildings more affordable is incredibly important to addressing the housing crisis.

   Multifamily residential buildings with less than 10 parking spaces are already exempted from Section 429.2. However, larger multifamily buildings like 12, 24, and 36 unit walk up apartments are required to add in expensive EV infrastructure and charging stations. Washington does have higher EV adoption rates compared to other states, but the growth in EV ownership is not equal across the state and there are many counties with low EV adoption rates. This proposal still allows multifamily residential buildings to add EV charging infrastructure and stations when it makes sense for the needs of their businesses, occupants, and

communities. Yet, it will remove unnecessary requirements for multifamily residential buildings with more than 10 parking spaces in areas with low EV adoption.

The proposal will not add additional enforcement, reporting, or inspection requirements.

6. **Specify what criteria this proposal meets.** You may select more than one.
   - ☐ The amendment is needed to address a critical life/safety need.
   - ☒ The amendment clarifies the intent or application of the code.
   - ☐ The amendment is needed to address a specific state policy or statute.
   - ☐ The amendment is needed for consistency with state or federal regulations.
   - ☐ The amendment is needed to address a unique character of the state.
   - ☐ The amendment corrects errors and omissions.

7. **Is there an economic impact:** ☒ Yes ☐ No

   If no, state reason:

   If yes, provide economic impact, costs and benefits as noted below in items a – f.

   a. ***Life Cycle Cost.*** Use the OFM Life Cycle Cost **Analysis tool** to estimate the life cycle cost of the proposal using one or more typical examples. Reference these **Instructions;** use these **Inputs.** Webinars on the tool can be found **Here** and **Here**). If the tool is used, submit a copy of the excel file with your proposal submission. If preferred, you may submit an alternate life cycle cost analysis.

   Baseline represents the current code language, Alternative 1 represents this proposal. Baseline results in $60,000 cumulative costs. Whereas Alternative 1 results in $0. This proposal achieve significant savings.

   See attached Excel workbook for full analysis.

   b. ***Construction Cost.*** Provide your best estimate of the construction cost (or cost savings) of your code change proposal.

   The following calculations use a 12-unit multifamily residential building comprised of six one-bedroom, ~550 sq ft each, and six two-bedroom units, ~700 sq ft each, for a total of 7500 sq ft as a model R-2 building. Comparing the cost of adding one standalone electric vehicle charging station compared to the model code which would require an additional station for a total of two stations. The calculation includes the cost of overhead and profit in material and labor costs. However, this calculation does not include costs for electrical infrastructure work like panels, circuits, and wiring. Thus, the actual cost savings will likely be even greater than what the following calculations indicate.

   The proposals would produce a cost savings of:

   $-1.36/square foot

   $-847.41/ dwelling unit

Type	Material Description	Material Unit	Material Cost	Labor	Total	Cost/sq ft	Cost/DU
Model Code	Electric vehicle charging, free	2	$9,862.30	$306.56	$10,168.86	$1.36	$847.41

	standing, single connector, no RFID						
Proposal	Electric vehicle charging, free standing, single connector, no RFID	0	$0	$0	$0	$0	$0

Material and labor costs sourced from RSMeans (subscription required).

c. ***Code Enforcement.*** List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:

The proposal does not require extra code enforcement time.

d. ***Small Business Impact.*** Describe economic impacts to small businesses:

Potentially positive impact for small businesses by reducing regulatory burden and construction costs.

e. ***Housing Affordability.*** Describe economic impacts on housing affordability:

Multifamily residential or middle housing, which typically falls into R-2 occupancy, is a crucial aspect of increasing our statewide housing supply. Increasing housing supply and lowering the cost to build and operate housing is the primary way that the SBCC can improve housing affordability. This proposal produces cost savings for multifamily residential buildings. Therefore, the proposal will help contribute to more affordable housing in Washington.

f. ***Other.*** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

By lowering the initial construction cost for multifamily residential buildings this may result in an increased supply of these units and lower rental rates in the market and benefit renters.

Please send your completed proposal to: sbcc@des.wa.gov

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.